

Cyclin D2 promoter, MSP primers  
Acvn. No. U47284 Promote

Promoter region analyzed: -1616 to -1394 bp

FIGURE 1A

MSP Unmethylated 22 BP

**GT TATGTTATGT TTGT TGT ATG**

**T AAAATTCACC AACACAAATCA**

Unmethylated 21 BP MT 56

**F M 19 BP MT 58**

**CCTA AATAATCTTACCG CTTAACCG**

Forward UM 22 BP MT 56

Reverse UM 21 BP MT 56

R M 20 BP MT 56

FIGURE 1B

**Twist Promoter:** Accn No. AC003986  
Promoter Region analyzed: nts -51145 TO -51750

1	cattggactg	gggttccttc	cac <u><b>CG</b></u> aaagag	tgaacttctg	ccttt <u><b>CG</b></u> cgcaccc <u><b>CG</b></u>
61	agg <u><b>CG</b></u> tagtc	cttggatgt	tgggg <u><b>GG</b></u> <u><b>CG</b></u>	cagactgggt	<u><b>CG</b></u> ttgttagag gggaaaggag
121	ggcccagaag	gg <u><b>CG</b></u> agagag	cagg <u><b>CC</b></u> ggga	<u><b>CG</b></u> caaattcc	cagcccc <u><b>CG</b></u> cgcaccc <u><b>CG</b></u>
181	<u><b>G</b></u> tctcagaa	a <u><b>CG</b></u> ccaggac	ctc <u><b>CG</b></u> ggctg	gg <u><b>CC</b></u> <u><b>GG</b></u> <u><b>CG</b></u>	gttggcctt tggaaactcaa
241	gggtt <u><b>CG</b></u> tct	acctgaccat	tgggtggctc	<u><b>CG</b></u> GGgttgc	acttttcttg gcatggcccc
301	ccaccc <u><b>CG</b></u> cc	ccacaccacc	ccccaggccc	cagaatccca	aat <u><b>CG</b></u> gcccc ac <u><b>CG</b></u> gaccttag
361	agggtcttgc	gg <u><b>CG</b></u> agatga	gacatcaccc	actgtgtaga	agtgttgcg atgtgtcg
421	tcacagcc <u><b>C</b></u>	gg <u><b>CG</b></u> atgttt <u><b>CG</b></u>	gg <u><b>CG</b></u> atgttt <u><b>CG</b></u>	ggccaggac	agtctcc <u><b>CG</b></u> GaccGttcc
481	tgggt <u><b>CG</b></u> cc	taggtt <u><b>CG</b></u>	gg <u><b>CG</b></u> ctggcc	<u><b>CG</b></u> ca <u><b>CG</b></u> ctcc	Gg <u><b>GG</b></u> ggaaag gaa <u><b>CG</b></u> ccc
541	<u><b>CG</b></u> cccc <u><b>CG</b></u> cc	<u><b>CG</b></u> gaggg <u><b>CG</b></u>	<u><b>CG</b></u> gggggggg	gg <u><b>CG</b></u> gttagg agg <u><b>CG</b></u> gtgg	gg <u><b>CG</b></u> gttagg agg <u><b>CG</b></u> gtgg
601	agg <u><b>CG</b></u> cc <u><b>CG</b></u> cc	cc <u><b>CG</b></u> atgttt <u><b>CG</b></u>	cc <u><b>CG</b></u> atgttt <u><b>CG</b></u>	gg <u><b>CG</b></u> gac <u><b>CG</b></u> ta	atgttagac atgttagac
661	cc <u><b>CG</b></u> aggaaag	gggggggggg	<u><b>CG</b></u> gggggggg	gg <u><b>CG</b></u> aaactt	tcctataaaa
721	tt <u><b>CG</b></u> aaaag	tccctcttcc	tc <u><b>CG</b></u> tcagg	ggacttgaaa	gg <u><b>CG</b></u> aaacttcc <u><b>CG</b></u>
781	cctgcac <u><b>CG</b></u> ga	ggataaagag	cctccaaggc	ccaaatgacac	tgctggccccc aaacttcc <u><b>CG</b></u>
841	g <u><b>CG</b></u> ggctctg	cagcac <u><b>CG</b></u> gc	acc <u><b>CG</b></u> tttcca	tgca <u><b>CG</b></u> gtctc	<u><b>CG</b></u> cc <u><b>CG</b></u> at <u><b>CG</b></u> Gcc <u><b>CG</b></u> at <u><b>CG</b></u>
901	tg <u><b>CG</b></u> cttt	cttttggga	cct <u><b>CG</b></u> gggcc	atccacac <u><b>CG</b></u>	tccctccccc ctcc <u><b>CG</b></u> cc <u><b>CG</b></u>
961	cctccc <u><b>CG</b></u> cc	tcccc <u><b>CG</b></u> cc	cccc <u><b>CG</b></u> cc	cc <u><b>CG</b></u> ggggcc	tcc <u><b>CG</b></u> tc <u><b>CG</b></u> tcc <u><b>CG</b></u> tc <u><b>CG</b></u>
1021	tctcc <u><b>CG</b></u> cc	<u><b>CG</b></u> gg <u><b>CG</b></u> cat <u><b>CG</b></u>	<u><b>CG</b></u> gg <u><b>CG</b></u> cc	cc <u><b>CG</b></u> gggg cc <u><b>CG</b></u> cc	cc <u><b>CG</b></u> gggg cc <u><b>CG</b></u> cc tcc <u><b>CG</b></u> tc <u><b>CG</b></u>
1081	agg <u><b>CG</b></u> cccc <u><b>CG</b></u>	ctcttctccct	ctggcccc <u><b>CG</b></u> gg	cc <u><b>CG</b></u> gggg cc <u><b>CG</b></u> cc	cc <u><b>CG</b></u> gggg cc <u><b>CG</b></u> cc tcc <u><b>CG</b></u> tc <u><b>CG</b></u>
1141	atgcagg	a <u><b>CG</b></u> tgtccag	ct <u><b>CG</b></u> ccaggtc	cc <u><b>CG</b></u> ggcc <u><b>CG</b></u> cc	cc <u><b>CG</b></u> ggcc <u><b>CG</b></u> cc tcc <u><b>CG</b></u> tc <u><b>CG</b></u>
1201	gaggaaggac	cagacc <u><b>CG</b></u> ga	g <u><b>CG</b></u> cc <u><b>CG</b></u> cc	agg <u><b>CG</b></u> cc <u><b>CG</b></u> cc	agg <u><b>CG</b></u> cc <u><b>CG</b></u> cc tcc <u><b>CG</b></u> tc <u><b>CG</b></u>
1261	a <u><b>CG</b></u> ggagg <u><b>C</b></u>	<u><b>CG</b></u> ac <u><b>CG</b></u> gg <u><b>CG</b></u>	<u><b>CG</b></u> gg <u><b>CG</b></u> gg <u><b>CG</b></u>	gg <u><b>CG</b></u> cc <u><b>CG</b></u> cc	gg <u><b>CG</b></u> cc <u><b>CG</b></u> cc tcc <u><b>CG</b></u> tc <u><b>CG</b></u>
1321	gg <u><b>CG</b></u> gg <u><b>CG</b></u> cc	ag <u><b>CG</b></u> gg <u><b>CG</b></u> cc	cc <u><b>CG</b></u> gg <u><b>CG</b></u> cc	gg <u><b>CG</b></u> cc <u><b>CG</b></u> cc	gg <u><b>CG</b></u> cc <u><b>CG</b></u> cc tcc <u><b>CG</b></u> tc <u><b>CG</b></u>
1381	gg <u><b>CG</b></u> gg <u><b>CG</b></u> cc	gg <u><b>CG</b></u> gg <u><b>CG</b></u> cc	gg <u><b>CG</b></u> gg <u><b>CG</b></u> cc	Gg <u><b>CG</b></u> cc <u><b>CG</b></u> cc	gag <u><b>CG</b></u> cc <u><b>CG</b></u> cc tcc <u><b>CG</b></u> tc <u><b>CG</b></u>
1441	tctta <u><b>CG</b></u> agg	agctgcagac	<u><b>CG</b></u> gg <u><b>CG</b></u> gg <u><b>CG</b></u>	atggccaa <u><b>CG</b></u>	tgg <u><b>CG</b></u> gg <u><b>CG</b></u> cc tgg <u><b>CG</b></u> gg <u><b>CG</b></u> cc
1501	cagt <u><b>CG</b></u> gtga	ac <u><b>CG</b></u> gg <u><b>CG</b></u> cc	cccc <u><b>CG</b></u> cc <u><b>CG</b></u> cc	cc <u><b>CG</b></u> gg <u><b>CG</b></u> cc	cc <u><b>CG</b></u> gg <u><b>CG</b></u> cc tcc <u><b>CG</b></u> tc <u><b>CG</b></u>

**FIGURE 2A**

1561 aagctgagca agattcagac cctcaagctg **gCG**ccaggat acat**CG**actt cctctaccag  
1621 gtcctccaga **gCGa****CG**agct gactccaag atggcaagt gcagctatgt ggctca**CG**ag  
1681 **CG**gctcaggat **aCG**cctct**C** **G**tctggagg atgggggg cctggccat gtcc**CG****GT**cc  
1741 cac**CG**aggccccc caccgcctca gcaaggcc**CG** agacctaggat aaggac**CG**

**FIGURE 2B**

Unmethylated 193 BP

ET **TG**atgggttttttt**TGT** FUM (3) 21 BP AT 58

Ccttaacc**CAaa**; **CAcC**Aacc RUM (3) 20 BP AT 60

Methylated 200 BP

FM (5) 20 BP AT 58

RM (4) 19 BP AT 58

**FIGURE 2C**

RAR beta promoter, MSP primers

RAR beta promoter, MSP primers ACCN NO.: AF1157483

Promoter region analyzed: nt -196 to nt -357

ACCN NO. AF157483

**FIGURE 3A**

Unmethylated 163 BP

ggattggatgtGaqaaTGT FUM 21 BP AT 60

C AaCcCcAaTccAa  
C CAACCAaCCAa RUM 21 BP AT 60

Mathematics

FM(2) 19 BP AT 60

**RM(2)** 19 BP AT 58

FIGURE 3B

Homo sapiens serine protease-like protease (nes1) mRNA, complete cds  
AF024605  
ACCESSION

1 accaggcca gaccacaggc agggcaggc catgagagct cccatccctt cttccatcc  
61 ggcgactccc agatccggc tggcgaagct gctgccgtg ctgatggcgc aacctccgc cgccctctggc  
121 gccccggctc cccaaaacga cacgcgttg gaccccgaa gctatgggc aactctggc cgcagaggcg  
181 gcgtgtcc cccaaaacga cacgcgttg gaccccgaa gctatgggc aactctggc cgcagaggcg  
241 cgggctcgcc agccctggca ggtctcgctc ttacaacggcc tctcggttcca ctgcgggggt  
301 gtcctgggg accaaggatgg ggtgtgtgg gccggcaact gcccggacta gccaactgtgg  
361 gtcggatggatca cctgtgtgtt cttcaggggc agcaggctcg ccggacgact  
421 cgctctgttg tccatcccaa gtaccacca ggctcaggcc ccatccgtcc aaggcgaacg  
481 gatgagcacg atctcatgtt gctaagctg gccaggccgg tagtccggg gcccggcgtc  
541 cggccctgc agcttcctta cgcgtgtgtt cagccggag accagtggca ggttgctggc  
601 tgggcacca cggccggccg gagaatggaa tacaaaaaa ggctgacctg ctccagacat  
661 actatccgtaa gcccctaaaga gtgtgagggtc ttctaccctg gctgtggtcac caacaacatg  
721 atatgtgtgtt gactggacgg gggccaggac cctgtccaa gtgactctgg agggccctgt  
781 gtctgtgtgg agaccctcca aggcatcc tcgtgggggt tttaaccctg tggtctgtcc  
841 cagcatcccg ctgtctacac ccagatctgc aaatcatgt cctggatcaa taaaatgtata  
901 cgctccaaact gatcccgatg ctacgctcca gctgtatccaa atgttatgtc cctgtgtatc  
961 cagatggccca gaggtcccat cgtccatctt cttccatccc agtggctgaa actctccct  
1021 tgtctgcact gttcaaaacctt ctcgcggccctt ccacacccctt aaacatctcc cctctacact  
1081 cattccccca cctatccccca ttctctgtcc ttctgtccatcc tgaaatgcag  
1141 caaaggtttta ttcccgagaa gcccggaaagg cggtcatcc ccaggccctgt agaggcgtta  
1201 ctggggtcac ccaacccgtac ttccctgtcc actccctgtcc ttccctgtcc  
1261 agtgcctctt ctgaacctca gtttccatcc ctgcggccatcc  
1321 tcttagacat gttgtggatg gactatgata taacatgtgt atgtaaatct  
1381 gtcatgtaaag gcttaaacaca gttgggtgggtq agttctgtact aaaaatgggggg  
1441 aaaaaaaaaaaaaaaa

**FIGURE 4A**

Sequence analyzed: nts +169 to +349  
Exon 3 sequence



FIGURE 4B

<u>Unmethylated 128 BP</u>	<u>tTGtagggCTGgttgttt</u>	Nes1	FUM	20	BP	AT	56
	CACACaaatCaaaAAaaaaaccCA	Nes1	RUM	22	BP	AT	56

FIGURE 4C

## HOX A5 Promoter 3' to 5'

AC004080

16321 accaaaggag actgggagag **ggCG**caagag aagagagggg **ggaccC**Gagag **ccGC**Gtcccc  
 16381 **gCGgtCGCgt** ggatttagaa aaggctggc ttaccatga cttatgtgca gcttg**CG**cat  
 16441 ccagggttag atctgggtt **ggGCGggctC** **GgctCG**ctct **gCG**cact**C****G**c  
 16501 ctgct**C****G**ctg ctggagggg **Cgtccctcc****C** **GctccG**gac **GccG**tgc  
 16561 gctgctgtatg tggtgtctgc **CggCtC****G**gc **CggCtC****G**gc ctggagggtgc  
 16621 tttccc**GGCG** tggtgtctgt **Cgctgc****C****G**gg **CggGgg**cc **acGG****C****G**agc  
 16681 at**C****G**gctgtga ggaggt**CG** tggac**G**tgtggc **Cggctggctg** tacctgggt  
 16741 **CCGC**gtgg**CG** ctggcag**CG**t agctg**CGggC** **CCG**ctct**CG** gagccaaagt  
 16801 **CGagCGggCC** a**CG**ctgtgagat ccatgcatt gtggc**CG**tag **CCG**taacctgc  
 16861 gct**CG**cc**G**ag tcccctgaaatt gct**CG**ctcac **G**aaactatga tctccataat  
 16921 gtagtc**CG**gg ccatttggat ag**CG**ac**CG**ca aaatggattt aaaaaataag  
 16981 tttttgata ttttgtgtt **CCGGt****CG**tt ttttgtggat **CCGGt****CG**tt tagccccc  
 17041 gcacaattta tgatgaaatta tgaaaatgtac tggacatgt  
 17101 ggacccaaa tatggggta**C** **GacttC**gaat **cacCG**tgcatt ttttgtcc  
 17161 tgcctgatga cctctaggagg **taaactCG**tg cactaatagg  
 17221 ggggtgg**CGC** **CCGC**cccc**CG** **ggCGG**gtgcc **CCGG**ccagt tgcc**CG**cc**CG**tt  
 17281 **CGagCGccac** **CCG**cttgagg cagggctcat **CG**cccaaggctt c**CGac****CG**gg  
 17341 **cCGgggt****CG**a attgggtta cagccattatggcaaaatt cct**CG**catttc  
 17401 ccataggat gtaccaatttgc ttaggc**CG**tc agctgg**CG**at **cGCGG**cc**CG**  
 17461 agaggattgg

FIGURE 5A

Complement - 5' to 3'

Promoter region analyzed: nts -97 to nts -303

FIGURE 5B

UnMethylated 213 BP

**TGttTG** aagttdggTG FUM 18 BP AT 56

gtatTGtg attTGaaagtT Gtatt

ataac Aacttcaaat cacAac RUM 22 BP AT 56

Methylated 134 BP

**TGttCG** aagttdggCCGTCG FM 18 BP AT 58

tacCGtg attCGaagtC Gtat

taac GacttCGat GCGT RM 20 BP AT 56

FIGURE 5C

Sequencing 307 BP

Hox A5 Seq. F 23 BP AT 56

ggag ggaattaaagt atatgtt

Hox A5 Seg. R 21 BP AT 56

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ccaggta caggccagg qc

Evn B 18 BP AT 62

FIGURE 5D

*Homo sapiens* 14-3-3 sigma protein promoter and gene, complete cds.  
ACCESSION No. AF029081

1 ggatccagg ctgcctcc acttctcc caagccagg cccggcatg gtgggtatg  
61 ctcatgctgg caatacttga aacgggtta ttaatgctgg gtattttgca caattttata  
121 gaccctttt ctacatagtc tttttaat gaaaggagaa aatgtcagcc acatactgt  
181 ctgttagtgg ccagggtgaag ggttattcaga aggctgggtg gtttaataa gtttattcca  
241 agagaccttc tggctggaaat gagtggaggt gtgtgtgcat gtgtgtgt gttcatgtgt  
301 gccctgtatg aatgtggctg gctcccaat cccctggct gcccctgjc ccatccctt  
361 tgagtatcg aagcactctg agccaaaggg acaggggca tcacgagaaa  
421 accctgggtc cccactgggg ctcaggccag ctccttatct ttcccttcttca tatggacttc  
481 agacagccag tgtctggga ctctgcact ctaccccaag ccctacccac cagccccag  
541 gtgagggttc cagctggac cagccaaagc aggctgagcc tgccgtggg ggggggggtg  
601 atggctctgg ggaggggctg ccatccata agccacaccc cttccctctgaa gctctgaata  
661 tgggaccctag tgccaggagg tggaaagacaa ggtgtttctg ccaaacgggaa cctccatcca  
721 gagaaaaagg aeaagggtca gggtggccca agaggcaagt gaaggttggc ctgagtctgg  
781 gcccggaaact cagaggatgt ttctccctcg ctgggagctg tagtttcttata tcaaaataga  
841 tattgttcca ccatccccct ccttggccct tcaagtgggc tgaaggcttg gaaagtggaca  
901 taggaagtcc ccagatctg cccttctcac tccagaggct atgggtcaca gacaggctggg  
961 aatggcagcc acagagggtc cctctggaga aacagcttca cccaggccctc agggccctgg  
1021 gcatcactgc agtggccctg ggagggtgagg aagaaggctgg cttagggagg gggctcccac  
1081 ctacccctta tttaagccag tattcttgt tcctgtttgt aataaaaactt cagttataa  
1141 gagttggttt ggttttgtt tgctttcttcc ttctccctggg gctctgttcc gggcttggg  
1201 agccctctgt tcttcagac aaatttgggtt cttccctca cttggctggaa gatctgttcc  
1261 agcccaatgtca tctggctaca ttttccctca cttggctggaa gatctgttcc  
1321 agcagagagg gctggggctg agccccatg ggcacgtgaa aagaggccat  
1381 ctttgtccccc tccacccccc cctggccctcag gggcttggag accccaaat cttttccct  
1441 actggccccc cactccgatc ccaatgatgt gcccagctaa gaaaatgtt gagacagtag  
1501 attccaggat tggcccaatcc ctaccaccc tctctggatc caaccctgggg accaggcccc  
1561 agccagacaa ctcataaacac tccctcaggaa tggcccaacctt ctctggatc

FIGURE 6A

1621	caggattttg	ccatctcctq	gaccgttct	cacagcctgt	ccccctgtcg	ggggagctaa	caggccctt	tgcagagggt
1681	tagctggtaa	gaccgttcttct	tcggccaa	ccagcaacttgc	ccgctccctt	ccacaccca	ccacaccca	
1741	tctcatccctc	atcgcatgcc	tgtgctggtg	gtggtaggtt	catgggccc	gtccatctgt	ctgggtgtg	
1801	gtgcgggtgt	ttggatatacg	ggcaaggctaa	aaggccagg	ctccaggcac	tcccgctaa	gcagaaggat	
1861	cggatatacg	cagggcgtt	ctccagctgg	aagaggagggt	cccatgtgg	actgaggaag	tacgttgcg	
1921	cagggcgtt	cctgcctgaa	ggtgcctgg	tctgtgtgg	ggaggggtgg	gtgggtcg	gatggggaga	
1981	cctgcctgaa	actaacactc	ttatgtccctg	gttttctgtc	ccgctgagc	tttctctcac	ccgcccgtt	
2041	actaacactc	tctctcctgc	ttcattggct	gtgccttaag	ccttggccct	tctctcgccc	agaggcagg	
2101	tctctcctgc	gctgtggcag	cacctctccc	caccacggg	ccctgtcagg	ccgcctccct	cctcccaggc	
2161	gctgtggcag	ctgctaacc	tctctcttct	ccttcttgc	tgtcttgcgg	ggatctcca	gtgtgtcg	
2221	ctgctaacc	gggcttaagg	acctccctgag	gaccgtgtct	ctctgcctct	ccaggaatgg	cctgggggg	
2281	gggcttaagg	gccaggcacc	cggcactcc	acctgcctaa	cctgtggccc	atctgcacc	atctgtgcct	
2341	gccaggcacc	acagggtctg	cccccaaggcc	tgccccggct	gtgtgtctc	taggaccca	tagggcag	
2401	acagggtctg	gggctggcct	ctttggccca	ttcccgcctcc	atgcccggca	gagtgtgaa	agccataacg	
2461	gggctggcct	cacgaccca	ttagacaat	aatgtgactc	tacgtctata	tgctccctct	tcctccact	
2521	cacgaccca	gacttcccct	tcccggattt	gtgagggtgtc	aagactagga	atctggcctt	agaggcgtcc	
2581	gacttcccct	cctccacccc	ctcagatcag	gtacagccat	agtcaagccc	agcaggtttc	ctcaggagct	
2641	cctccacccc	gtctgggtgt	ttgatgggg	atgacgtgtc	tgaacaagt	tggtgactgt	tctaaggaca	
2701	gtctgggtgt	actggcttgc	tactgttccc	acggccctgtc	cactcccac	ccccaaacctt	ccaccaagg	
2761	actggcttgc	aggtaggtg	taggggggt	gggtgtccgg	ttaggtcttag	gcactgtggg	accaaggtag	
2821	ccgtgcacag	ccccatcac	ttcaggggcg	taaaggaaag	agctgagcc	aggaaaaatca		
2881	ccgtgcacag	gctgaggccca	gggctggggg	ctgctgtct	acctttttt	tttttaacca		
2941	gctgaggccca	aaataaagat	tcccctttc	ttggccatacc	atggctgtc	tggggccccc	tttactttgg	
3001	aaataaagat	ggcccgaggaa	tgggacttgc	agtggggcggt	tggaaacatat	ggctccccc	cgctcccagc	
3061	ggcccgaggaa	tttcttccag	ctggccagg	ctgctctgg	gatttacaag	cacaacgaa	ccaggaggga	
3121	tttcttccag	cacagaaaa	gtggctgaca	tccttttccac	tctggccctt	cagaacttt	ggtctcaatt	
3181	cacagaaaa	ccagaccca	cccaagctta	gctgacctt	ggatttctgtat	gcaggctgag		
3241	ccagaccca	acaggggtt	taactcagt	ttgggactgc	catacccatg	aactgagcc	aqcccaagg	
3301	acaggggtt	aacgatctca	tggaaacttc	tctctcccca	gttgctgcac	tacatcaaga	tacacacatg	
3361	aacgatctca	tgcatacact	gtactatgg	ctaaaaaaat	acgtaccgct	accgttca	aagggttgc	
3421	tgcatacact							

**FIGURE 6B**

3481	cgagtccgg	gcccatttc	tcatcttaac	ctgtgaggag	gatgatgtca	gccttttac
3541	agatgggaa	actggagact	aaggaagaaa	caggagtc	ccaagggtcac	ccagctggca
3601	aaggcggaa	tcccagatcg	gaacctgatc	tctgccccga	gctctgagcc	atctgcacta
3661	cccaaggaaat	gaatacagcg	gtggggggat	gagatcttg	agaaacccta	aaattagaga
3721	atgtcatagc	cagtagaggg	cttagagttg	atctgggcca	gcctccctgt	tttactgtatg
3781	gagaaattga	agcccaggaa	caggaaggga	cctgccccaa	gcctataac	agagctggga
3841	tgcagtcaca	cactctgacc	tcatctccatt	ctctctccat	aaattctgca	ctgtctctag
3901	actggactgg	tttagatgtg	ggataactcta	aacagcagt	ccttcaagag	aaaaagaatc
3961	agaactacga	atcaactaaa	agtaatgtaa	gctactctg	gcacactgccc	tatgggtctcg
4021	ccctgcctca	caaggaggca	caaaaataat	taaaataat	taatatccct	tcccaagggt
4081	aaccaggaaa	gtaaaggcttt	ggcttaggtaa	ctggactctt	gttcacaaact	agccagttggg
4141	aaaagggtgt	agagctccct	ctggccacct	gtttaatttg	atcattccaa	gacagaaca
4201	tttcttagga	agtttttct	agaatctacc	tggtgtcccc	cccaactgcta	tcaagccct
4261	gtcctctgtc	ctcagtgag	gtagagagca	aatggttgt	gctttcttca	tcacaaccct
4321	tcaaaggccta	tttattaccag	ctaagaaggga	ttgggttgact	atggccaga	gcccttgagc
4381	ctgctggtag	aatggatgtct	gtacaggagg	gtggggggat	aggaggcaga	atgagaaag
4441	cccttttgag	ctgcaaccccc	agctccctgtc	ctgctgactic	agacagctga	ctgtggagct
4501	ccatgcccctg	ccagggccctg	ctgcctccctg	cccgctctg	ctcctgaact	tggaaaatgg
4561	aggcccaggag	gcaaaagggg	gtaccctgaga	caggaactga	gtcaggatca	acaggccaga
4621	ggggcagga	ggttatcaggc	agccctggctc	ccagatgcac	ccctgagctc	cagcaggggaa
4681	ggagtaggaa	tgaaggggct	tccttgcct	tgctcatggc	tatggggagg	gcgtgaacca
4741	ccaccaggtc	ctctggctta	agtgggggg	agccaaatgg	ccctccctgg	actcaggctc
4801	caaaggccct	gggcctggct	tccagggtcc	cagtgtccgt	ggatctccag	ttttcccaag
4861	gacttgggaa	agccccggct	ggatgacttag	tacaaatgaa	ggcccccgtgag	gttccaggac
4921	ctgctgaggt	cacaggaata	tccttagatca	agcttgcctaa	acccacggcc	cacaggctgc
4981	atgtggccca	gaatggctt	gaatgcagcc	caacacaat	tagtaaactt	tcttaaaaca
5041	ttatgagatt	tttttgc当地	tttttttagt	catcagttat	tggtagtgtt	
5101	ggttatattt	atgtgtggcc	caagacaatt	cttccaatgt	ggcccaaggaa	agccaaaaga
5161	ttggacacgc	ctgtccacgc	tggagtaggaa	ggaggcagtg	ctgagcacat	ctggccattc

**FIGURE 6C**

5221	atccatctgg	agagagaagg	ctatgggcaa	actggccat	ctcccccgt	gacaccaggc
5281	tggaaaggtc	tggccttgg	taagtccctgg	ttgggggtc	ttcctcatt	cacagaacct
5341	aactctatgt	tagtgctttg	ttagtatatg	ttgatcataa	taaagtgtac	gggattttt
5401	cacatgataa	taataggtgt	catctggccg	ggcatgggtgg	cttaggccta	taattcagc
5461	actttggaaag	gctgaggcg	gtggatcaat	ttaggtcagc	tgttcgagac	cagcctggcc
5521	aacatggtga	aaccacatct	ctacttaaaa	aaaaaaaat	taaaaaatt	agctgggtgt
5581	ggtgggtcac	ccttgtaatc	ccagctactc	gggaggctga	ggcaggagaa	tcacttgaac
5641	ccaggagggt	gaggttgcag	ttagctgaga	ttgtgcccact	acaatccagg	ctgggtgaca
5701	agagcggaaac	tccgtctcaa	aaaaaaagaa	aataataatc	ataatagttg	ccatccattc
5761	tacttgctt	tccatthaact	cgtgtaatcc	tcacaaggatc	cattttatag	ttacaggAAC
5821	ttaggctcac	agagctaaa	tcacttggcc	aaggccacaa	acagctataa	gaattacatt
5881	taggcgtct	gattccaaag	atacttagtct	attctgtatc	tcatagacaa	acaatacata
5941	ttcactttt	tgttgtgtt	ttgtttttag	acggaggctt	gctctgtcac	ccaggctgg
6001	gtgcagttggc	gccatctcgg	ctcaactgcaa	cgtccggctc	ccgggttcaa	gcgattctcc
6061	tgcctcagcc	tcccggatgt	ctgggactac	aggcatgtgc	caccatggcc	ggctaatttt
6121	ttgttatttt	agttagagaca	gggttttcct	gggttagcca	gaatggtctc	gatctctgtga
6181	ccttgatgc	caccaccc	aggctccaa	agttgtgaga	tgacaggcgt	gagccacccg
6241	gtccgaccta	tattcactat	ttataaattg	gagagaataa	gaaaatcaa	aggccagggt
6301	gtatgtactc	acacctgtaa	tcccaggact	ttggaaagc	aaggcaggag	gattgcttga
6361	acccgaaagt	tcgagaccag	cctgggcaac	atggtgagac	cctgtctcta	aaaaaaatac
6421	aaaaattagc	tgggcgttgt	ggtgaggacc	ttattcttag	gaaggtgagg	caggaggatc
6481	acctggggcc	aaggagggtt	agactgcgt	gagctgtgt	cataccactg	tacttgcgc
6541	tggacatcg	agtaagaccc	tatctctaaa	aaggaaattt	agaaggaaagg	aaatcaaagg
6601	gaagaaaaat	cactcaatct	cactaccta	agataccctc	tgaagtgg	tattttatgt
6661	tggttcctat	tgtttctgt	gtcagttctc	tgtatttgc	aaaatcttgg	ggacgtcaaa
6721	cttaaaatcc	cctttacttc	cttggaaaacc	ctgttagcat	agccagaca	tgtccctact
6781	cctccctgtg	gcaaaggagaa	gatctctgc	tttgggtcccc	aggttctgg	cctaaggcctc
6841	cctccaggag	ggaagatgtag	tgttcagaca	ctcagatgt	ctgggggaga	cacaggcctg
6901	tgaattatc	ctggctcaac	tattaggatcg	gcagaatccc	agtgaaggga	gccctacctc
6961	ttaggccccat	ctaagccat	cttagtgggtg	ggctatgggtg	ggggcagataa	gcaggaaatcc
						atccctatag

**FIGURE 6D**

7021	gctcaatgcc	aacaccctta	ggtaaaactc	ttgatgaaac	ttgagggccag	ggctccggca
7081	agcaggaaa	gaacgttgc	aacagaggtc	tccatctcg	aggactctcg	caggggtcag
7141	agatgggca	atqgtcaaaa	gqaaggaaaca	ggcaggcac	agtggctcat	gccataatc
7201	ccagcactt	gggaggctga	ggcaggagga	tcgcttgagc	ccaggagtt	gagacctgcc
7261	tggcaatgt	agttagatc	gctctctatt	taaaaaaaa	aaaaaggaaa	gaacaagtaa
7321	acttctgaga	aacaggctgg	ggaggaggatc	actagctgg	aattgtgtcc	ccataaaaaca
7381	gaatggatg	tgtcaactgcc	acctccctt	ctcaagtccct	tctctcccc	ggttgtctagc
7441	gtccccctgg	gggatcaaacc	tggactgtt	cccagcctca	gacagagagc	agtctgagtc
7501	aggcaggaaa	gtgggacagc	cgggaggctg	gaccccaccc	tctgtgagcc	ccgctgtac
7561	ctgatggcat	gtggcttgg	gagggcagggt	gacctggcgt	ggagggccag	aggtaaatac
7621	ctcaaaacaag	tggcaacagg	ccacaactt	gaaaggaaa	atttgttagt	gtggaaat
7681	gtgtccaaaca	aacctactgg	gtgactaatt	acaaggctg	ggctggagct	tcaagggctg
7741	cttgttaaac	acttcattaa	gccccactt	gaaagctg	acctgcgc	tctggagct
7801	cagagggac	cctgaggggg	atggggcct	ggaggatgg	accatctca	gttagactga
7861	gaaggaggct	ggatctca	tccaaacaca	gtctggagct	cataggtcg	aggcctaata
7921	ggagaaaaag	ctaaaggaaag	agggtcgaga	aagggtttc	agggaaattgg	tggctatgtg
7981	actttgagca	aatctcaccc	ctctctgaga	cttagtgg	ccatctctat	gttctgtgt
8041	gtgtcacaga	gacatggtg	ggattaaatt	cgatcggtat	atgaaagtgc	ttgggaaact
8101	ccatggccct	acctaataacat	gagtttatctt	cacctgaac	aaggggaaa	gttacctgg
8161	aggatttaga	accccatctt	cctgaacctt	tatgggtct	gtcgaggctg	aaggaggcag
8221	gggctaaagg	cagtccttag	ccccctggaa	ggcaactgtga	aagtggatct	gtttgagaa
8281	ggcgtttccct	gatgtggca	gccccatgtgt	gccagcccc	aacaagagg	ggcagccctgg
8341	agcctggaaa	ggtgccagt	cagggtgggg	ccacggccag	attttctctg	ctgactgttc
8401	tgatgattca	ccccccacatc	ccaggctttt	tacctttact	gcagagccgg	aaagggtgtg
8461	gggaagagag	gagaggagg	caggctttgg	gccctggtcc	cgccccctgc	tcctcccac
8521	cttctctgg	gcctggccac	ccaggccaaa	ggcaggccaa	gaggaggaga	gacacagagt
8581	ccggcatttgg	tcccaggcag	cagtttagccc	gccggccggc	tgtgtgtccc	cagaggccatg
8641	gagagggcca	gtctgatccca	gaaggccaaag	ctggcagagc	aggccgaacg	ctatgaggac
8701	atggcagccct	tcatgaaaagg	cgccgtggag	aaggccgagg	agctctccctg	cgaagaggcga

**FIGURE 6E**

**FIGURE 6F**

8761	aacctgctc	cagtagcccta	taagaacgtg	gtggggggc	agagggctgc	ctggagggtg
8821	ctgtccagta	ttgagcagaa	aagcaacgag	gagggctcg	aggagaagg	gcccgagggtg
8881	cgtgagtacc	gggagaaggt	ggagactgag	ctccagggg	tgtgcacac	cgtgctgggc
8941	ctgctggaca	gccacccat	caaggaggcc	gggacgccc	agagccgggt	cttctacctg
9001	aagatgaagg	gtgactacta	ccqctacctg	gcccgggtg	ccaccgggtga	cgacaagaag
9061	cgcattatg	actcagcccg	gtcagccctac	caggaggcca	tggacatcag	caagaaggag
9121	atgcccggca	ccaaacccat	ccgcctgggc	ctqccctg	acttttccgt	cttccactac
9181	gagatcgcca	acagccccga	ggagggcatc	tctctggca	agaccactt	cgacgaggcc
9241	atggctgatc	tgcacacccct	cagcgggac	tcctacaagg	acagaccctt	catcatgcag
9301	ctgctgcgag	acaaccgtac	actgtggacg	gccgacaagg	ccggggaaaga	ggggggcgag
9361	gctcccccagg	agcccccaagg	ctgaggttgt	ccggccacgg	ccccccctg	ccccctccag
9421	tccccccaccc	tgcccgagg	actagtatgg	ggggggaggc	cccacccctc	tcccctaggc
9481	gctgttcttg	ctcccaaaagg	ctccgtggag	aggactgg	agagctgagg	ccacctgggg
9541	ctggggatcc	cactctctt	gcagctgttg	ccggccatca	accactggtc	atgccccac
9601	ccctgctctc	cgcaccggct	tcctcccgac	ccaggacca	ggctacttct	ccctctctct
9661	tgcctccctc	ctgccccctgc	tgcctctgt	cgttagaaat	gaggaggtgc	ccgcctgtg
9721	gctgagaact	ggacagttggc	aggggctgg	gatgggtgtg	tgtgtgtgtg	tgtgtgtgtg
9781	tgtgtgcg	cgcggccagt	caagaccgg	actggggaa	agcatgtctg	ctgggggtga
9841	ccatgtttcc	tctcaataaa	gttcccctgt	gacactccctc	ctgtctatct	tcccaagtct
9901	ggcgtatggc	tgggagtgg	actggaaatct	gacttagaga	cccttgacttt	ggacacctgtga
9961	gttagggccc	tgaactccct	aggggctca	gtggcccgca	cgcaagactt	tgagtcagg
10021	tgagggccgg	gtcc				

*H.sapiens* Wilms tumor (WT1) gene promoter.

ACCESSION No. X74840

1	agcttgcagg	cccgccccgg	gccaggcagg	tacaggcagg	cggactgcaa	ccgggttgctt
61	ccctccgtc	gcgcctggcc	gtcccacgct	gcgcccgtcgc	tgctgcctcc	tggcgccccct
121	gggattttat	acgcacccct	gaaacacgct	ccgctccggc	cccccgggttct	tctcccttggcc
181	tagggtgt	tcccaatag	atactgactc	cttagaaga	tccaaaaacc	aaacccaaac
241	acccttacc	ggcccaaac	acctgctctg	ggcgccccgg	gctgccaac	agagactaga
301	cgaaggaggt	cagatttagc	gaantttcg	agctccaaa	gattcgaaca	ctaactcgcg
361	cccggtggcc	gatggagggtt	ctccctactc	cactccttgg	tcccttaac	tggcttcgc
421	ctcctgtca	atcactgaggc	aaccagaatg	gtatcctcg	ccaggggccac	aggcagtgtgct
481	cggcgagggt	gctccaggag	ttacccgctc	ctgcccgggt	tcgatatccaa	accctccccc
541	tacccccc	tc(cc)aaact	ggcgccccgg	atgctccggc	cgagaatatac	gcagggttttg
601	ggcggttggc	caagggttt	cttcctcct	aaactagccg	ctgtttccc	ggcttaaccg
661	tagaagaatt	agatattcct	cactggaaag	ggaaactaag	tgctgctgac	tccaaattta
721	gttagggggc	aaccggttcc	gcctggcgca	aacctcacca	agtaaaacaac	tactagccga
781	tcgaaatacg	cccggttat	aactggcgca	actccggcc	acccaactga	gggacgttgc
841	tttcagttcc	cgacctctgg	aacccacaaa	gggcccaccc	tttcccagt	gaccccaaga
901	tcatggccac	tcccctaccc	gacagtctta	ccagactcaa	ccagactcaa	gggtgtcaaaag
961	caagggtata	cgtttcttg	aagcttgcgt	gagttttcc	tgaaggttccc	tgcgctttcc
1021	gcctcttgg	aggcctacctg	cccctccctc	caaaccactc	ttttagattta	acaaccccat
1081	ctctactccc	accggattcg	accctggccc	gactcactgc	ttacctgtaaac	ggactctcca
1141	gtgagacgag	gctcccacac	tgccgaaggc	caagaagggg	aggtgggggg	aggtgtgtgc
1201	cacaccggcc	agctgagaggc	gctgttgtgg	ttgaaggaga	gggtgtctcc	gagaggggacg
1261	ctccctcggaa	ccggccctca	cccaggctgc	ccaaaggagca	ccaaggggccc	gcgcggcgctg
1321	cctggggggg	cttggggctgc	ttttggggatg	gagcggggccga	gcctccctggc	tcctctcttt
1381	ccccggcccc	ccggccctcc	ttttggggaaagc	tgaggggcagc	caggcaagc	caggcaagc

FIGURE 7A

**FIGURE 7B**

1441	gggttaaggag	ttcaggcagg	cgtccccacacc	cggggctctt	ccgcaacccg
1501	cgtccccca	cttcccgccc	tccctccac	ctactattc	accCACCCAC
1561	ccgggacggc	aggccaggcg	cccgggcccc	gcccgttccct	ccacccAGAG
1621	tcttgctgca	ggaccccggt	tccacgttgt	tcccgaggcc	ctggacttcc
1681	gctccggggcc	tgggtgccta	cagcaggccag	ggcggtctcag	cacacgctcc
1741	tctggccaa	gttagggcgc	gcggaggcca	gatccgggg	cgggggca
1801	gcggggcgtc	cgggtctgag	cctcaggaaa	gttccggggac	cggaggaggcc
1861	tgcgtccggc	cgtccctcc	ctgggtggcg	gcggcggtctg	ctgaacggcgc
1921	cggcgcagtg	ggggccgggt	ctggactttg	cgtggctccga	ctggcgggac
1981	tggggggccc	cggccggcca	cggactcgc	tgcccttggt	tgcggggcg
2041	tcatcaaaca	ggagccgagc	tggggcgccg	cggttccgt	tacgggtcgt
2101	ccttcaactgt	ccactttcc	cggacttgc	cgtggctccgt	cgtggctccgt
2161	ccttcgggtcc	tctccggccc	cggttgcgt	cgccacccccc	cgtggctccgt
2221	cgcctactact	gcccaactgtc	ctcgaggaggc	cgccggat	cgtggctccgt
2281	ccggggggcg	cccccata	agcccgat	cgccggat	cgtggctccgt

Estrogen Receptor (ER) : Homo sapiens estrogen receptor beta gene, promoter region  
and partial cds  
Accession Number AF191544

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1 actataggc ACGGGtgggtC GaCGgcccCG gctggatattg atagatgcatttttttccacc
61 ctccacattc tttttctgcc tggggctta caagtataa ccaccaaattt CGgtttccat tccttcattga CGgtttccat
121 ttccagagat atcttgttaa gacagagtct CGctctgtCG cccaggctgg aatgcaggatgg aatgcaggatgg aacccaaatgg
181 tttttttaa gacagagtct CGctctgtCG cccatgttca agCGattctc ctgcctcagg ctccttgatgtt
241 gctcaactgca accttCCGcct cttggcatgtg ccacCGGGtc cagccaattt ttgttattttt agtagagaCG
301 gctggattt aatgttgtca ggctggtctc aaaccttctga cctCGtgatc cacctgctc
361 agtttccacc CGctctgttca ggcaccattt CGtgatc CGctctgttca CGtgatc CGctctgttca
421 ggcctccaa aatgttgtca ttataggat gaggcaccattt CGtgatc CGctctgttca CGtgatc CGctctgttca
481 ttttaaaccc atcattttaac attttctcca taagggtggca aggaggaaagg gcatatgggg
541 actgggtact ttgagagacc ccaggacagg agacaggagg gctggatgg gctggatgg gcatgttgc
601 tgctggatgtt atttgcaggC Gacacactct ttcCGccaa actaacttct ctgcctcaag
661 gacagggaga ctctgcctt caacctgaga gaaaccaggaa ctctcaggctt taatggaaaat
721 tggacttagg gtggggcagt ggagactttt cacagctttt gtttagctga tgaaggcagat
781 gcttctccat ctttggagcc tggggcttcat acctgtggac ctcatcttta tcaaccaggaa
841 gcacacttCG Gtctctctat ttggggctaa cacaaaacag ctgaggctgg tactgtaaaa
901 ctttccctcc aaatggcccc cctCGtcttc ctctatttga gatctggatc acaaccctca
961 aaaaccatgt cccttatggc accttggatg atggggatgg gataattttgtt gacacatgtt
1021 gacaactggg ggttctcaca atggccctgtt ggtcacatgc tactttccct ttcatttca
1081 tcagcaacag ctggccttaaa gccaggatggactgtggcc tagtctCGca ccctggggct
1141 cctgtctgggg tgggtgggg gaaacccccca ttaaggctgg ggaactgggg ctgcccacagg
1201 ggggCGCGag gggcccttCGC CCGagaagg gggggggcag gtcgcctcc CGaggatgggg
1261 CGCCGGcc Gaggcacag gtccacttca agtggatctca tcttgaggcc tgagaaccacca
1321 tgggatctt gatctaaCGC Gaaaggccct cccatgtgacc actccaggcc CGagggttac CGtttgctgt
1381 ctccctccac ctcttagcc CGctttgc actccaggcc CGgtttccat CGtttgctgt
1441 gggatttga caaacccaaa gcctctctgtt tttccaccat ggctcccttag aatcagacat
1501 ctgttctgaa tgacactt gtggatgtcagg GtgatccCG aatgtgtgtc
1561 cccagactgg ctgtatctt gtCGgcattcc cccaggacct ggtggaaat gcatattctc
1621 agggccactt ccagacactt taaatctgag actggggctg CGggggaggCG catctgtgCG

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FIGURE 8A

FIGURE 8B

Unmethylated G 288 BP FUM 21 BP AT 60

**TG** agttgtGatG gttttgg  
C C A A A A C C C A T C A C A A C T C A R U M 20 BP AT 58

FM 18 BP AT 60

CGggaaag tacGtgtcg

FIGURE 8C